

Work Order ID 68280 -2



Page 1

Monday, April 11, 2011 12:49:02 PM

Item ID: D2646

Accept



Setup Start



Revision ID:

Item Name: Aft Cap

Stop



Start Date: 4/11/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 6.00



Customer:

Reference:

Approvals:

Process Plan:

Date: 11/04/11

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2646

Rev C

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 13845 ☐ 1-Spin as per Dwg D2646 ☐ 2-Material release note required

CL 11/04/11 (60)

110

0.00



Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure Material Release Note is attached

11/05/13 (60)

120

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

8/11/16

counts
(x60)
QSP015

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

0.00



Small Fab

Small Fab

Memo

0.00

Small Fab

1-Drill using DT8026 as per Dwg D2646. 2-Open holes to .297 as per Dwg D2646. 3-Debur

60x ϕ M-11/05/25

140

0.00



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

8/10/30

count
(x60)

150

0.00



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

Memo

0.00

x60 ϕ M-11/05/31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 6.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



Powdercoat

White Gloss(Ref:4.3.5.1) per QS1005 4.3-Alum

0.00

Powder Coating

Memo

START TIME:

FINISH TIME:

OVEN TEMPERATURE:

170



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

180



Small Fab

Small Fab

Small Fab

Memo

Install inserts as per Dwg D2646

0.00

0.00

60x Ø m-11/06/15

60 Ø m 11/06/15

60 Ø m 11/06/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 68280

Monday, April 11, 2011 12:49:02 PM



Page 4

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Item Name: Aft Cap

Start Date: 4/11/2011 Start Qty: 6.00



Cust Item ID:

Required Date: 4/15/2011 Req'd Qty: 6.00

Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8 4/16/11

60
60

200



Packaging

Packaging

Identify as per dwg & Stock Location: *FR-4*

0.00

Memo

0.00

60 4 4/16/11

210



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

11/16/20

MF
11-06-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Monday, April 11, 2011 12:49:11 PM

Page 1

Work Order ID: 68280

Parent Item: D2646

Parent Item Name: Aft Cap



Start Date: 4/11/2011

Required Date: 4/15/2011

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP: G 05.08.22 Hole size revised in Step 5 KJ/JLM
IPP Rev: H Changed Inserts 07-02-19 JLM
IPP rev I changed inserts 07.06.11 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS7-1032-130

Purchased

No

110

Each

597.0000

2

120



Insert



HL 4/10/15

Location

Loc Qty

Loc Code

ST281

200

117331

200

117717

120

ST282

397

116800

397

D2646P

Purchased

No

180

Each

0.0000

1

60



Aft Cap



60
Ry/S/L3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

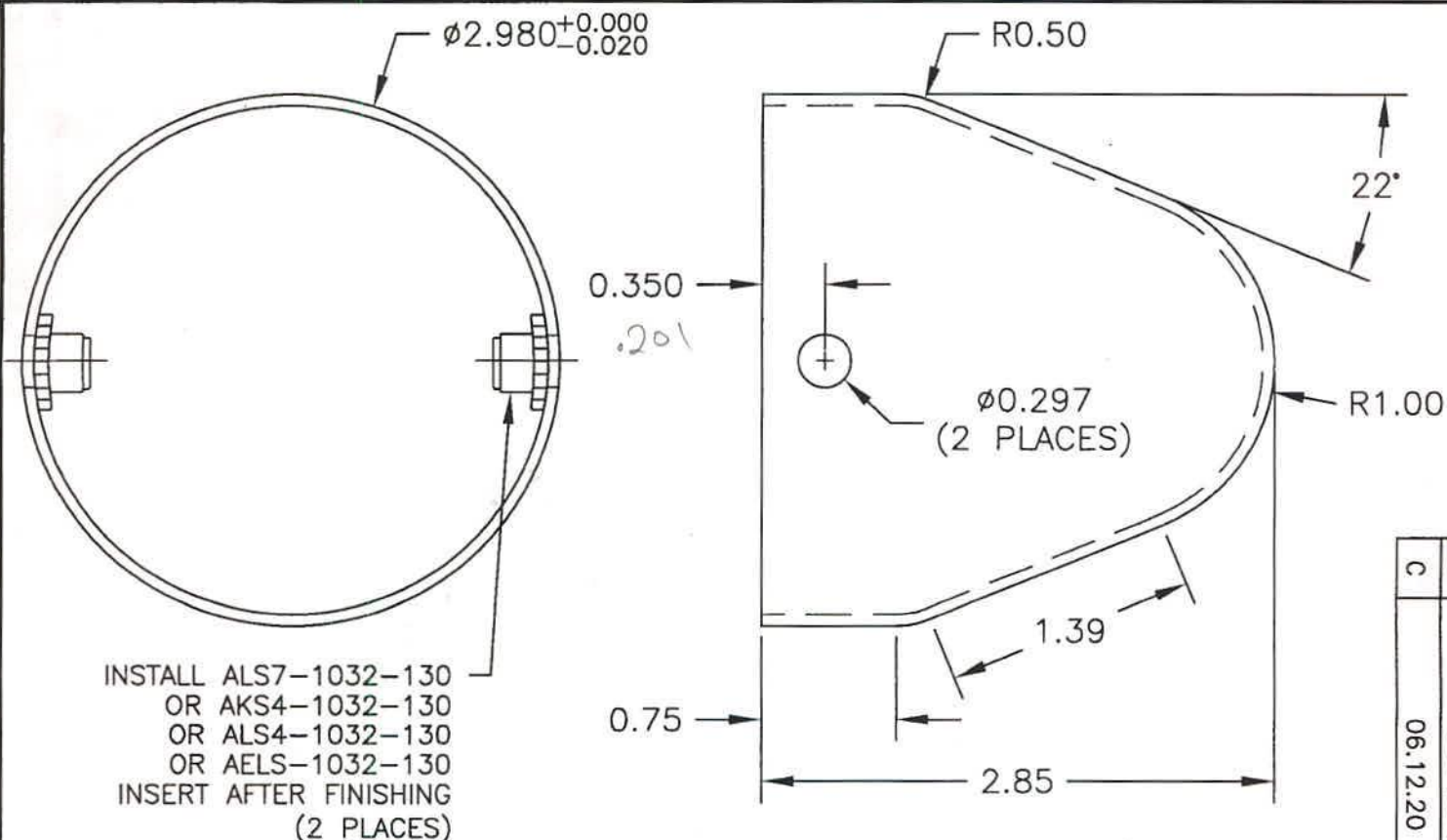
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries



DESIGN	DS	DRAWN BY	PH	DART AEROSPACE USA, INC.
CHECKED		APPROVED		PORT HADLOCK, WA
DATE	06.12.20			REV. C
				SHEET 1 OF 1
				SCALE 1:1
A		97.03.25		NEW ISSUE
B		05.04.01		CHANGE TO CLOSED INSERTS
C		06.12.20		CHANGE TO OPEN ENDED INSERTS



D2646 AFT CAP

- 1) MATERIAL: ALUMINUM 1100-0 0.063 THICK (QQ-A-250/1)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

RELEASED
07.02.12

SHOP COPY
REWORKED
REWORKING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 68780
2011-04-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO13845

Purchase Order Date 4/11/2011

PO Print Date 4/11/2011

Page Number 1 of 1

Order From :

VC-SIE001

SIEG'S MANUFACTURING LTD.
6236 - 205 STREET
LANGLEY, BC V2Y 1N7
CA

Contact Name

Vendor Phone

604 530 7455

Vendor Fax

604 530 7490

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED
CXL 4/11/11

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2646P	Aft Cap	4/22/2011 Yes	60.00 Each	FedEx PI collect	\$6.4700	\$388.20

Special Inst: SPIN AS PER DWG D2646 REV. C
B68280

PO Total:

\$388.20

CERTIFICATE OF CONFORMITY
REQ'D UPON DELIVERY

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 4/11/2011

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable



Sieg's Manufacturing Ltd. Packing Slip

Metal Spinning & Fabricating

6236 205 Street

Langley, BC, Canada V2Y 1N7

Phone:(604)530 7455 Fax:(604)530-7490

Packing Slip No.:

39147

Date:

05/05/2011

Page:

1

Sold to:	Ship to:
DART AEROSPACE LTD. 1270 ABERDEEN STREET HAWKESBURY, ONTARIO K6A 1K7	DART AEROSPACE LTD. 1270 ABERDEEN STREET HAWKESBURY, ONTARIO K6A 1K7
Order No.: 13845	Sold By: KAULBARS, ARLA
Shipped By: fed ex	Ship Date: 05/05/2011
Tracking No.: 076882515001054	

Item No.	Unit	Description	Quantity
D2646P	Each	AFT CAP	60
Comment:			



Sieg's Manufacturing Ltd.

6236 205 Street Langley, B.C. Canada V2Y 1N7

Ph#: (604)530-7455 fax#: (604)530-7490

arla@siegsmfg.com

INSPECTION REPORT

Date: May 5/11

Customer: Dart Aerospace

Packing Slip: 39147

Part#:	Quantity	Material	Check holes	Insp. By.
D2646P	60	<u>1100-0064</u>	N/A	<u>AS</u>

Notes:

Material Certification Attached: ✓

COPPER AND BRASS SALES**MATERIAL TYPE****ALUMINIUM ALLOYS****PRODUCT DESIGNATION**

1100 1350 3003 3004 3105 5005 5083 5086 5182 5454 6061 6063

"WARNING"

SMALL CHIPS, FINE TURNINGS AND DUST MAY IGNITE READILY. EXPLOSIONPOTENTIAL MAY BE PRESENT WHEN DUST OR FINES ARE DISPERSED IN THE AIR; FINE, DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH CERTAIN METAL OXIDES; OR, CHIPS, FINES, DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH WATER OR MOISTURE. KEEP AWAY FROM IGNITION SOURCE. USE EXPLOSION- PROOF VENTILATION. KEEP MATERIAL DRY.

INHALING LARGE AMOUNTS OF COPPER, MAGNESIUM OXIDE, MANGANESE OXIDE, AND ZINC OXIDE FUMES OR DUST MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS. CHRONIC OVEREXPOSURE TO COPPER MAY CAUSE THICKENING OF THE SKIN; AND SKIN, TEETH, AND HAIR DISCOLORATION. CHRONIC OVEREXPOSURE TO MANGANESE DUST CAN CAUSE CENTRAL NERVOUS SYSTEM DAMAGE, SCARRING OF THE LUNGS AND REPRODUCTIVE HARM IN MALES. TARGET ORGAN IS PRIMARILY THE LUNG, BUT REPEATED HIGH EXPOSURE CAN ALSO AFFECT THE LIVER. CHRONIC OVEREXPOSURE TO TIN DUST OR IRON OXIDE DUST/FUME MAY CAUSE LUNG SIDEROSIS. CHRONIC OVEREXPOSURE TO SILICON DUST CAN CAUSE CHRONIC BRONCHITIS.

THIS PRODUCT ALSO CONTAINS LEAD AND CHROMIUM COMPOUNDS. LEAD IS KNOWN TO CAUSE REPRODUCTIVE TOXICITY AND IS A KNOWN CARCINOGEN. EXPOSURE TO CHROMIUM DUST OR FUME MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS AND KIDNEY AND LIVER DAMAGE. UNDER HIGH TEMPERATURES, HEXAVALENT CHROMIUM MAY BE PRODUCED, IF IN THE INSOLUBLE FORM, IT IS A CONFIRMED HUMAN CARCINOGEN. (CALIFORNIA PROPOSITION 65). IF COATED WITH OIL, MAY CAUSE SKIN IRRITATION/DERMATITIS BY CONTACT. WELDING FUME IS LISTED AS A POSSIBLE CARCINOGENIC TO HUMANS. READ THE ALUMINUM/ALUMINUM ALLOYS MATERIAL SAFETY DATA SHEET (MSDS) ON FILE WITH YOUR EMPLOYER BEFORE WORKING WITH THIS MATERIAL.

* If processing or recycling produces particulate, use exhaust ventilation or other controls designed to prevent exposure to workers. Examples of such activities include melting, welding, grinding, abrasive sawing, sanding and polishing. Any activity which abrades the surface of this material can generate airborne particulate. Use appropriate NIOSH approved respiratory protection (P95; P100 for lead with, quantitative fit testing required) if exposures exceed the permissible limits.

* The Occupational Safety and Health Administration (OSHA) have set mandatory limits on occupational exposures.

* Aluminum, in solid form and as contained in finished products presents no special health risk.

* Sold for manufacturing purposes only. This product can be recycled; contact your sales representative.

The Occupational Safety and Health Administration require employers to provide training in the proper use of this product.

For additional information, call or write to Copper and Brass Sales, 22355 West Eleven Mile Road, Southfield, MI 48033, telephone 248-233-5600, or visit our web site @ www.copperandbrass.com.

ALUMINUM LABEL NO.300-1088

ISSUED 10/01/2008



Alumax Mill Products, Inc.
(an Alcoa Inc. business)
1480 Manheim Pike
Lancaster, Pa. 17601

Certification of Test Results

SOLD TO

COPPER & BRASS SALES INC
22355 WEST ELEVEN MILE ROAD
SOUTHFIELD, MI 48034

SHIP TO

LEVELTEK
3236 STATE ROAD 39
PO BOX 148
LA PORTE, IN 46352

CERT NO 0001260980
DATE 12/13/2010
SKID NO 957162
SKID WGT 6,959
PAGE 1 OF 1

ORDER NO	LO0400	PO NO	5400080193-R01		MILL FINISH NON ANODIZE QUALITY OUT: STANDARD MILL FINISH IN: STANDARD MILL FINISH NOT EMBOSSED
ITEM NO	1	PART NO	ALFLR01226		
ALLOY	1100	TEMPER	O	FORM COIL	
GAUGE	.06300	WIDTH	48.0000	LENGTH 0.0000	

Alcoa Certification 0001260980

LOT: 461649 COIL: C01 DROP: 0P06534

INGOT	SI	FE	CU	MN	MG	CR	NI	ZN	TI
0P06534	0.12	0.43	0.13	0.05	0.05	0.01	0.01	0.01	0.01

HEAD ULTIMATE STRENGTH 14.6 KSI
TAIL ULTIMATE STRENGTH 15.0 KSI
HEAD YIELD STRENGTH (OFFSET = .2%) 6.8 KSI
TAIL YIELD STRENGTH (OFFSET = .2%) 5.0 KSI
HEAD ELG IN 2 IN., AT FRACTURE 30 %
TAIL ELG IN 2 IN., AT FRACTURE 30 %

CHEMICAL COMPOSITION ACCORDING TO ASTM E-1251-07
CHEMISTRY EXPRESSED AS % W/W FOR EACH REPORTED ELEMENT
MECHANICAL PROPERTIES ACCORDING TO ASTM B-557-10

MECHANICAL AND CHEMICAL PROPERTIES MEET THE REQUIREMENTS OF:

ASME SB209 1100 O, ASTM B209-07 1100 O

** END OF CERTIFICATION **

→ ACCEPTABLE BASED ON SIMILARITY WITH
"M-DRAWN" SPECS CALLING ASTM B209
FOR SHEET METAL ALUMINUM.
(REF. M2024T3S, M5052H3ZS, M6061T6S)

11.05.16
081042.

We hereby certify that, unless otherwise indicated, the material covered by this report has been manufactured, inspected, and tested in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition. Also, note that mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product. Certification of test results shall not be reproduced except in full. This material was melted in the United States or a qualifying country (REF DFARS 225.872.1A); It was manufactured in the United States.

These commodities, technology and software exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. law prohibited. This certification complies with EN 10204:2004.

Authorized By:

JEFF KREADY, LAB SUPERVISOR